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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/619,712	07/14/2003	Werner Menk	03-422	7755

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BACHMAN & LAPOINTE, P.C.
900 CHAPEL STREET
SUITE 1201
NEW HAVEN, CT 06510

EXAMINER

WYSZOMIERSKI, GEORGE P

ART UNIT	PAPER NUMBER
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1742

DATE MAILED: 04/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

C4

Office Action Summary	Application No. 10/619,712	Applicant(s) MENK, WERNER	
	Examiner George P. Wyszomierski	Art Unit 1742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 10-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 10-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 10, 13, 14 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over UK 1,482,724.

The UK '724 reference discloses a spheroidal cast iron alloy for use in making engine parts such as piston rings, and containing amounts of carbon, silicon, molybdenum, aluminum, nickel, zirconium, magnesium and sulfur overlapping the amounts of these elements as defined in the instant claims. While UK '724 does not disclose any specific example of a composition meeting all of the presently claimed limitations, the overlap in composition establishes a prima facie case of obviousness of the claimed composition, because the prior art teaches the utility of the prior art composition over the entire disclosed range(s) therein, which utility (engine parts) is substantially the same as that of the present invention.

With respect to claims 13 and 14, UK '724 does not disclose adding an Al-Zr prealloy immediately before casting, or a temperature of over 1460.deg.C before casting. However, these features do not patentably distinguish the claimed invention from the prior art because it is conventional practice in the metal casting art to make an alloy by melting alloying elements at their melting point or greater in order to provide a homogeneous mixture prior to casting, and Applicant has not demonstrated any novel or unobvious results arising from the use of an Al-Zr prealloy or the use of a particular temperature before casting.

Consequently, a prima facie case of obviousness has been established between the disclosure of UK '724 and the presently claimed invention.

3. Claims 11, 12, 15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over UK 1,482,724, as above, in view of any of Kaufmann (U.S. Patent 3,657,878), Tobey (U.S. Patent 3,835,598), Koike et al. (U.S. patent 5,489,345), or Hartsock et al. (U.S. Patent 5,530,213). This is a new ground of rejection.

The UK '724 document, discussed supra, does not disclose an exhaust manifold for an internal combustion engine made from the cast iron alloys disclosed therein. Each of Kaufmann, Tobey, Koike and Hartsock indicate that it was conventional in the art, at the time of the invention, to employ cast iron alloys in exhaust manifolds; note, for instance Kaufmann column 5, lines 33-34, Tobey column 1, lines 14-17, Koike column 1, lines 21-22, or Hartsock column 1, lines 14-16. Therefore, to use the cast iron alloys of UK '724 (which discloses engine parts in general) as an alloy for an exhaust manifold as required by the present claims would have been an obvious modification of the materials as disclosed in the UK '724 patent.

4. In a response filed February 6, 2006 (to rejections based on UK '724 alone) Applicant alleges that the "consisting essentially of" language in the instant claims distinguishes the present composition from that of the prior art, that Applicant's specification demonstrates unobvious results from the features of instant claims 13 and 14, and/or that the combination claims (e.g. requiring an exhaust manifold) are not taught in the prior art. Applicant's argument shave been carefully considered but are not persuasive of patentability because:

a) While the UK '724 compositions include additional elements not recited in the instant claims (e.g. V, Nb and/or Ta, Mn), it requires small amounts of these elements, and it is unclear what features, if any, of the present invention would be altered by the presence of these

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elements in amounts as discussed in the prior art. Therefore, the prior art composition is considered to be one "consisting essentially of" the presently claimed elements.

b) With regard to claims 13 and 14, the relevant disclosure on pp. 3-4 of the present specification states that

"If the temperature does not drop below 1460.deg.C. during casting and if the elements Al and Zr are only added immediately prior to casting, for example as an Al-Zr prealloy, it is possible to produce ferritic cast iron products with a transformation temperature of over 950.deg.C."

This is simply a statement of fact and not indicative of unexpected results. First, it is unclear whether or not Applicant is the discoverer of this fact, or whether it was known previously. More important, however, it is unclear how or whether this is different from the UK '724 materials, i.e. no comparison is of record indicating what the transformation temperature would be in a prior art material.


c) With regard to the combination claims, the examiner believes that the newly applied references in item no. 3 supra supply any deficiencies that may have been present in the UK '724 reference.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to George Wyszomierski whose telephone number is (571) 272-1252. The examiner can normally be reached on Monday thru Friday from 8:00 a.m. to 4:30 p.m. Eastern time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King, can be reached on (571) 272-1244. All patent application related correspondence transmitted by facsimile must be directed to the new central facsimile number, (571)-273-8300. This new Central FAX Number is the result of relocating the Central FAX server to the Office's Alexandria, Virginia campus.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

GPW
April 11, 2006


GEORGE WYSZOMIERSKI
PRIMARY EXAMINER
GROUP 1700